UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/691,489	10/18/2000	Michael R. Mannette	00-689	5122

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EXAMINER
MOORE JR, MICHAEL J

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 09/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/691,489	MANNETTE ET AL.
	Examiner	Art Unit	
	Michael J. Moore, Jr.	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☒ Claim(s) *17 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 October 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date *1/2/2001*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement (IDS) submitted on 1/2/2001 is in

compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has

considered the information disclosure statement.

Specification

2.   Applicant is reminded of the proper language and format for an abstract of the
disclosure.

The abstract should be in narrative form and generally limited to a single
paragraph on a separate sheet within the range of 50 to 150 words. It is important that
the abstract not exceed 150 words in length since the space provided for the abstract
on the computer tape used by the printer is limited. The form and legal phraseology
often used in patent claims, such as "means" and "said," should be avoided. The
abstract should describe the disclosure sufficiently to assist readers in deciding whether
there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information
given in the title. It should avoid using phrases which can be implied, such as, "The
disclosure concerns," "The disclosure defined by this invention," "The disclosure
describes," etc.

3.   The abstract of the disclosure is objected to because of the following: On line 3,

the phrase "the second message" is not needed following the word "received". On line

4, the word "the" is missing between the words "and" and "period". Lastly, the word

"said" used on line 6 should be replaced with "the". Correction is required. See MPEP

§ 608.01(b).

Claim Objections

4.   Claims **1-3, 8-14, 17, and 18** are objected to because of the following

informalities:

Regarding claim **1**, on line 10, the word "the" is not needed.

Regarding claim **2**, on line 3, the phrase "the transmission rate" should be "a transmission rate".

Regarding claim **3**, on line 3, the word "an" should be "a".

Regarding claim **8**, on line 7, the phrase "the period" should be "a period".

Regarding claim **9**, on line 1, the word "the" is not needed. On line 4, the phrase "the rate of the data" should be "a rate of the data". Lastly, on line 5, the phrase "the rate of said second clock" should be "a rate of said second clock".

Regarding claims **10 and 11**, the phrase "the rate of said second clock" should be "a rate of said second clock".

Regarding claim **12**, on line 1, the word "the" is not needed. Lastly, on line 3, there is some confusion regarding the phrase "instructing said second device to said first device in a TDMA format". It is believed that this claim was meant to be similar to claim **5**.

Regarding claim **13**, on line 1, the phrase "the rate of a clock" should be "a rate of a clock". On line 6, the phrase "the period" should be "a period". On line 7, the phrase "the rate" should be "a rate". On line 5, the word "message" should be "messages". Lastly, on line 7, the phrase "the period" should be "a period". Also, there is some confusion regarding the limitation of "a comparator for comparing the rate of said local clock with the period between successive timestamps in successive synchronization messages". There does not appear to be support in the specification pertaining to the comparison of the local clock rate and the synchronization period. It is believed that the

period of the local clock and the synchronization period are to be compared as in claims

1, 8, and 17.

Regarding claim **14**, on line 3, the phrase "the rate of said data" should be "a rate

of said data".

Regarding claim **17**, on line 10, the word "message" should be "messages". Also

on line 10, the phrase "the time" should be "a time". Lastly, on line 11, the phrase "the

period" should be "a period".

Regarding claim **18**, on line 2, the phrase "the rate" should be "a rate".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter, which the applicant regards as his invention.

6.   Claims **1, 4, 8, and 13** are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

7.   Claim **1** recites the limitation "said local counter" in line 12. There is insufficient

antecedent basis for this limitation in the claim. Claim **1** recites the limitation "said

registers" in lines 12 and 13. There is insufficient antecedent basis for this limitation in

the claim. The phrase "said local reference registers" would be more precise. Claim **1**

recites the limitation "said local clock" in line 18. There is insufficient antecedent basis

for this limitation in the claim. Lastly, claim **1** recites the limitation "said local reference

clock" in line 19. There is insufficient antecedent basis for this limitation in the claim.

8.   Claim **4** recites the limitation "said data" in line 2. There is insufficient antecedent

basis for this limitation in the claim.

9.   Claim **8** recites the limitation "said second clock" in line 7. There is insufficient

antecedent basis for this limitation in the claim.

10.   Claim **13** recites the limitation "said local clock" in line 6. There is insufficient

antecedent basis for this limitation in the claim. Lastly, claim **13** recites the limitation

"said local clock" in line 7. There is insufficient antecedent basis for this limitation in the

claim.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12.   Claims **8-16** are rejected under 35 U.S.C. 102(e) as being anticipated by Har-

Chen et al. (U.S. 6,429,902). The Har-Chen et al. reference teaches all of the

limitations of the listed claims with the reasoning that follows.

Regarding claim **8**, "sending successive synchronization messages from the first

device to the second device, the synchronization message having a timestamp" is

anticipated by the program clock references (PCRs) of Figure 5 sent from encoder 130

to decoder 142 of Figure 6. "Receiving the successive synchronization messages at

said second device and determining a synchronization period between said successive timestamps" is anticipated by decoder 142 as well as ΔPCR 146 (synchronization period) shown in Figure 6. "Determining the period of said second clock of said second device" is anticipated by ΔLTC 152 shown in Figures 5 and 6. "Comparing the synchronization period with the period of the second clock of the second device, wherein the comparison determines a difference" is anticipated by the ΔPCR 146 to ΔLTC 152 comparison in evaluator 154 of Figure 6. Lastly, adjusting the period of the second clock based upon the difference is anticipated by column 4, lines 49-52, where it states that if ΔPCR $\neq$ ΔLTC, then the frequency (1/period) of the decoder's oscillator that generates the LTC time stamps will be adjusted.

Regarding claim **9**, "sending data from the first device to the second device" and "receiving the data at the second device" is anticipated by the encoded data 138 transfer from encoder 130 to decoder 142 of Figure 6. "Determining the rate of the data" is anticipated by ΔPCR 146 (1/frequency) shown in Figure 6. Lastly, "adjusting the rate of the second clock based upon the rate of the data" is anticipated by column 4, lines 49-52, where it states that if ΔPCR $\neq$ ΔLTC, then the frequency (1/period) of the decoder's oscillator that generates the LTC time stamps will be adjusted.

Regarding claim **10**, "wherein the rate of the second clock is adjusted using a voltage controlled oscillator" is anticipated by the decoder oscillator spoken of in column 4, lines 49-52.

Regarding claim **11**, "wherein the rate of the second clock is adjusted using a pulse stretcher" is anticipated by the decoder oscillator spoken of in column 4, lines 49-52.

Regarding claim **12**, "sending a MAP message from the first device to the second device, the MAP message instructing the second device to the first device in a TDMA format" is anticipated by the encoded data transmission 140 from encoder 130 to decoder 142 shown in Figure 6.

Regarding claim **13**, "a clock having a period" is anticipated by local clock 148 of decoder 142 of Figure 6. "Means for receiving successive synchronization messages, each of the synchronization messages containing a timestamp" is anticipated by decoder 142 (means) as well as PCRs (timestamps) shown in Figures 5 and 6. "Means for determining the period of the local clock" is anticipated by local time counter 150 of Figure 6. "A comparator for comparing the rate of the local clock with the period between successive timestamps in successive synchronization messages" is anticipated by the ΔPCR 146 to ΔLTC 152 comparison in evaluator 154 of Figure 6. Lastly, "means for adjusting the period of the local clock based upon the comparison" is anticipated by column 4, lines 49-52, where it states that if ΔPCR $\neq$ ΔLTC, then the frequency (1/period) of the decoder's oscillator (means) that generates the LTC time stamps will be adjusted.

Regarding claim **14**, "means for receiving data" is anticipated by the encoded data 138 transfer from encoder 130 to decoder 142 (means) of Figure 6. "Means for determining the rate of the data" is anticipated by ΔPCR 146 (1/frequency) outputted

from PCR extractor 144 (means) in Figure 6. Lastly, "means for adjusting the rate of the

local clock based upon the comparison" is anticipated by column 4, lines 49-52, where it

states that if $\Delta PCR \neq \Delta LTC$, then the frequency (1/period) of the decoder's oscillator

(means) that generates the LTC time stamps will be adjusted.

Regarding claim **15**, "wherein the comparator uses a voltage controlled oscillator"

is anticipated by the decoder oscillator spoken of in column 4, lines 49-52.

Regarding claim **16**, "wherein the comparator uses a modulo comparator" is

anticipated by evaluator 154 of Figure 6.

Allowable Subject Matter

13.   Claims **17 and 18** are allowable over the prior art of record.

14.   The following is a statement of reasons for the indication of allowable subject

matter:

Regarding claim **17**, the Burns et al. (U.S. 6,449,291) teaches a hybrid fiber coax

network, a cable telephone modem with a local clock, and a cable modem termination

system (headend unit) with means for sending successive synchronization messages

that contain timestamps. Burns et al. also teaches the determination of a

synchronization period (difference time between timestamps). Refer to the abstract of

the Burns et al. reference. Burns et al. fails to teach a means for determining the period

of the local clock and comparing this period to the synchronization period so that a

corresponding adjustment can be made to the period of the local clock.

Regarding claim **18**, this claim is further limiting to claim **17** and is thus also

allowable over the prior art of record.

15.   Claims **1-7** would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Burns et al. (U.S. 6,449,291), Acampora et al. (U.S. 6,266,384), Bernath et al. (US 2001/0043622), Mitra et al. (U.S. 6,744,697), Hulyalkar et al. (U.S. 6,347,084), Wu (U.S. 6,698,022), and Cloutier (U.S. 5,790,543) are all references that contain material pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.
Examiner
Art Unit 2666

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FRANK DUONG
PRIMARY EXAMINER